

**Optical Science, Engineering, and Instrumentation SD97 Symposium**

**Optical Manufacturing and Testing II**

(Conference Title)

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(Conference Chair)

Testing of optical components to assure performance in the high average power environment

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Prefer oral presentation

Abstract (<250 words):

Evaluation and testing of the optical components used in the Atomic Vapor Laser Isotope Separation (AVLIS) plant is critical for qualification of suppliers, development of new designs and processes, and assurance of performance in the production cycle. The range of specifications requires development of optimized test equipment and methods which are not routine or readily available in industry. This includes index homogeneity, subsurface damage left after polishing, microscopic surface defects and contamination, coating absorption, and high average power laser damage. The approach to testing these performance characteristics and assuring the quality throughout the production cycle is described.

Keywords: photothermal deflection, absorption measurement, laser damage testing, total internal reflection microscopy, interferometry

Biography:

Robert Chow received the B.S. degree in mechanical engineering from UCB, and MS/Ph.D degree in materials science from Stanford University. He has worked at Varion Associates developing sputtering, rapid thermal, and molecular beam epitaxy process equipment. Currently at LLNL, he is working on defect reduction and process enhancements of high power laser coatings.